



DII COE XML Effort

Shared Data Engineering
(SHADE)



Agenda

- XML Management Challenge
- Management Philosophy
- DII COE XML Governance
 - XML Policy
 - Registry
 - XML Coordination



XML Management Challenge

XML: One Language, Many Vocabularies

```
<latitude_degrees>30N</latitude_degrees>
```

```
<latitude units="degrees" hemisphere="north">30</lat
```

```
<lat>
```

```
<hemisphere>N</hemispher  
e>
```

```
<deg>30</deg>
```

```
</lat>
```

These 3 XML fragments are:

- Equally valid ways to express the same data in XML
- Well-formed per the W3C XML Specification
- Non-interoperable



Some Management Required for Interoperability

- “In-use” XML must be made visible/accessible
 - XML component re-use should be facilitated
 - Need open, participatory XML Configuration Control processes
- Conflicting XML should be avoided
 - Overlapping terms/definitions impede horizontal integration
 - Namespace uniqueness

**Developers
Asking for Help!!**



Recommended XML Management Philosophy

Market *with* some Controls

- **Appropriate for a DoD that:**
 - has complex, “many-to-many” problems
 - must deal with competition
 - is constrained to lightweight admin overhead



-- existing acquisition oversight



Market-Driven Features

- Low barriers to entry
- Program Managers as primary change agents
- Communities of Interest as arenas for change
- Components as unit of exchange (commodity)
- Electronic Marketplace as key change mechanism



COE XML Governance

- Electronic Marketplace:
 - XML Registry *within* COE Data Emporium
 - Market Place Rules
- Namespace CM Responsibilities:
 - Distributed across COE Engineering Staff and Namespace Managers from COIs
- Coordination:
 - Namespace Managers' Forum
 - XML Sub-panel to COE Data TWG (SSD-MD)
 - Individual COI (Namespace) CM "boards"
 - *Ad hoc* meetings with other Government, Allied, and Commercial XML activities



XML Component Registration

DII-COE XML Registry Objectives

- Technical Requirement

- Ensure unique ID of in-use tags, schemas etc. (like network port assignments)

<MSG:aircraft_model_and_type>**F14**</MSG:aircraft_model_and_type>

- Management Objectives

- Visibility to Enable Management of “in-use” XML and Encourage Re-use
- Information Interoperability
 - Identify and converge synonyms within CM process on cost-benefit, prioritization basis

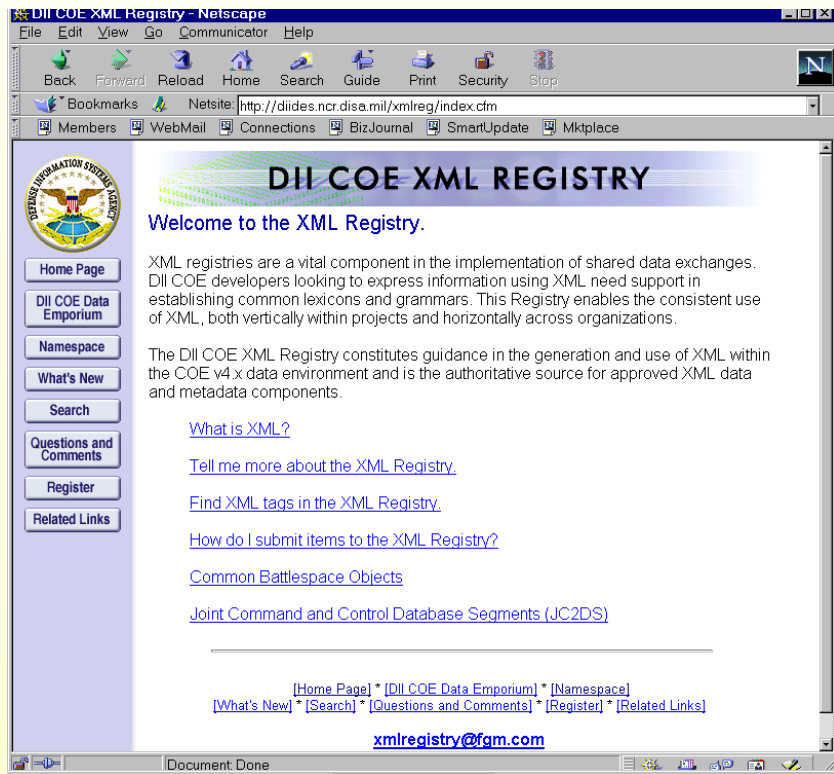
*Purpose is visibility and re-use,
not standardization through
mandate!*



Electronic Market Place

DII-COE XML Registry Status

<http://diides.ncr.disa.mil/xmlreg>



**DII COE Data
Emporium**

<http://diides.ncr.disa.mil/shade>

- 10C 17 May 1999
 - Public Access
 - Messages (FOUO) - Password protected
- Improved Version
 - Available Jan 01
 - 10K elements
 - SIPRNET version early in CY01
- Handles
 - XML Registration
 - Namespace Creation & Mgt
- NATO Coordination
 - NC3A XML Workshop
 - Request & Receipt of DII-COE Software



Market Place Rules

DII COE XML Guidance

XML Tag Registration Requirement

- Consult XML Registry before creating new XML components and reuse existing XML where practical
- Indicate planned use of Registered Components by formally subscribing to them
- Submit (where required)
 - additional XML components (and amplifying information) or
 - recommended modifications to existing components

Namespaces Management

- With CRCB concurrence, DII COE Chief Engineer:
 - Charters selected agents to manage XML Namespaces
 - Example: DIA/PM MIDB manages Intelligence XML tags
 - Manages COE and TBD Namespaces



Namespace CM Tasks

- Coordinate Stakeholders
 - Establish and Run Coordination Venue(s)
 - Resolve Issues within Namespace
 - Coordination across Namespaces
- Register XML and Publish Status
- Perform Versioning





DII COE Namespaces/Managers

- **Aerospace Operations/USAF**
- **COE/DISA**
- **Combat Support/DISA**
- **Finance and Accounting/DFAS**
- **General Military Intelligence/DIA**
- **Ground Operations/Army**
- **Geospatial & Imagery/NIMA**
- **Logistics**
- **Messages/DISA**
- **METOC/Navy**
- **Personnel/DIMHRS**
- **Tracks & Reports/Navy**

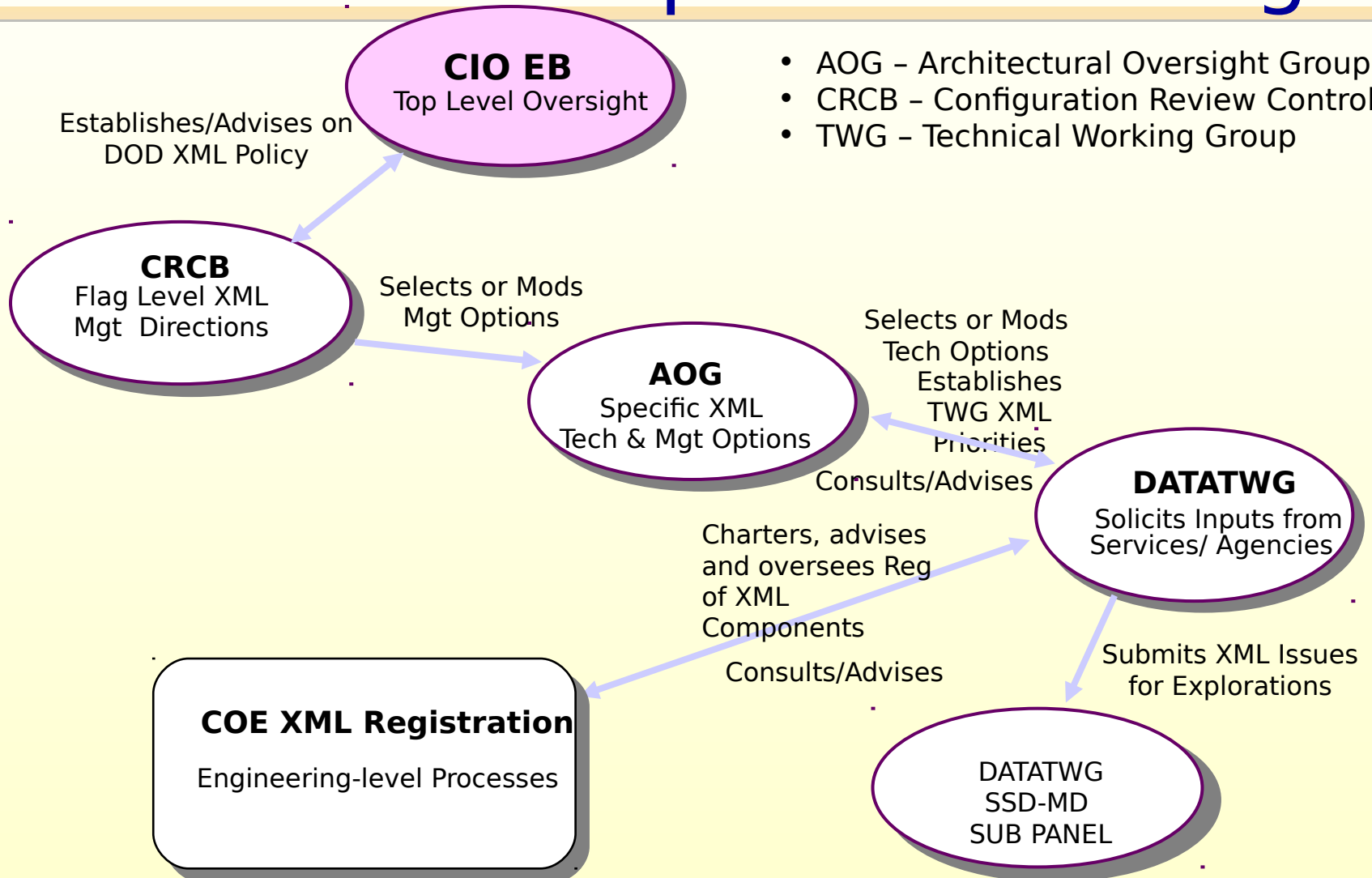
Other Proposed

- **Training**
- **MASINT**
- **NBC**
- **Info Mgt**
- **US Exports**



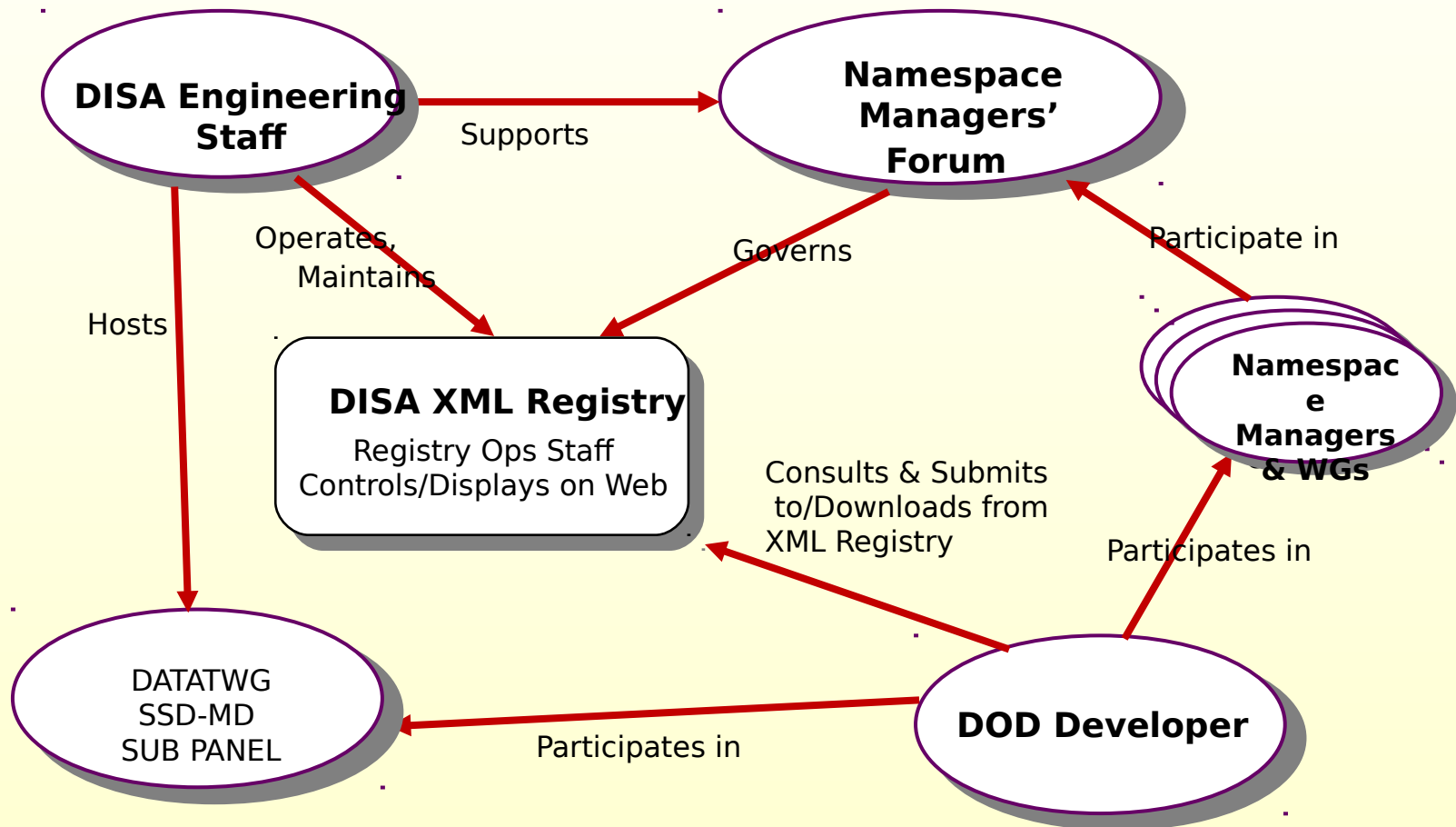
DoD XML Governance Top-level Oversight

- AOG – Architectural Oversight Group
- CRCB – Configuration Review Control Board
- TWG – Technical Working Group





XML Registration Engineering-level Processes





Contact Information

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SHADE Data Emporium
<http://diides.ncr.disa.mil/shade>



Backup



What is a Namespace?

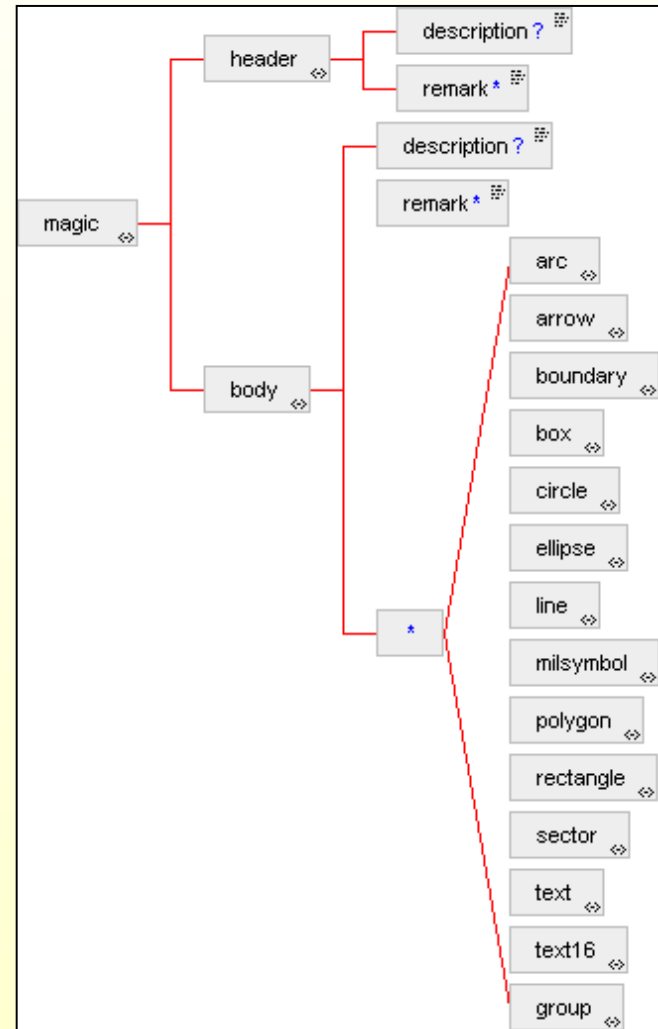
- A technical mechanism
 - Intended to support XML reuse from multiple sources (A, B, etc. . . .)
 - Namespaces allow consumer's parser to distinguish "A's" tags from "B's" tags
- COE applies to XML management
 - Collection of XML metadata for a subject-area domain
 - Namespace managers* oversee registry/repository records holding XML metadata collections

*Recruiting Configuration Managers of key data resources



XML Components

- Schemas
 - Contract between data provider and data consumer
- XML Elements & Attributes
 - Name, Definition, Data Type, Constraints, Children
- Stylesheets
 - Processing instructions to render or transform XML





What Types of Information Resources Are Managed?

DII COE XML Registry - Microsoft Internet Explorer - [Working Offline]

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites History Print View Source

Address http://shadow2/xmlreg/registry_info.cfm#XML Go

Links Customize Links Free Hotmail Windows

The Namespace Manager's responsibilities will include the transitioning of information resources from one status to another. [Table 1](#) lists the valid types of information resources. The status levels are developmental, candidate, approved, rejected, deprecated, and retired.

Table 1 - Information Resource Types

Information Resource Type	Registry Manifest Document Term	Description
XML Element	InformationResourceTypeXMLElement	An XML tag, either complex or a terminal node (A container element or data element).
XML Attribute	InformationResourceTypeXMLAttribute	An XML attribute that may be associated with 1 or more XML elements.
Document	InformationResourceTypeDocument	A Word, PDF or ASCII text document (.doc, .pdf, .txt) document that may be associated with one or more information resources
Domain Document	InformationResourceTypeDomainDocument	A document containing the valid domain values for an XML Element or XML Attribute. This document is also a XML file adhering to the registry_domain_values.dtd
Schema Document	InformationResourceTypeXMLschema	A schema document such as a DTD that describes the structure of a document. The following types are currently supported (DTD, RDF, SOX, XDR, DCD, DML, BIZ, XSD, OSC)
Package	Package	A logical collection of tags, attributes and documents that are submitted to the XML registry.

Done Local intranet



XML Data Compliance Metrics

Integration and Runtime Specification

- 8 COE Compliance Level for XML Registered within "ENT" Namespace
- 7 Registered within COI Namespace(s)
- 6 Submitted Mapping of Logical Model to Physical Schema
- 5 Registered

